## **EAST Search History**

## EAST Search History (Prior Art)

| Ref# | Hits | Search Query   | DBs  | Default<br>Operator | Plurals | Time Stamp          |
|------|------|--|--|---------------------|---------|---------------------|
| S1   | 6    | (("4417847") or<br>("5901579") or<br>("5341647")).PN.  | US-PGPUB;<br>USPAT;<br>USOCR; EPO;<br>JPO; DERWENT | OR                  | OFF     | 2009/04/27<br>07:48 |
| S2   | 11   | ("2786626"  <br>"2819836"  <br>"3947146"  <br>"4303372"  <br>"4321006"  <br>"4362462").PN. OR<br>("4417847").URPN.   | US-PGPUB;<br>USPAT; USOCR                          | OR                  | ON      | 2009/04/27<br>07:48 |
| S3   | 1030 | (cryogenic near10<br>distillation) and<br>compressor   | US-PGPUB;<br>USPAT; USOCR                          | OR                  | ON      | 2009/04/27<br>08:00 |
| S4   | 762  | (cryogenic near<br>distillation) and<br>compressor   | US-PGPUB;<br>USPAT; USOCR                          | OR                  | ON      | 2009/04/27<br>08:00 |
| S5   | 25   | (cryogenic near<br>distillation) and<br>compressor and<br>intercooler  | US-PGPUB;<br>USPAT; USOCR                          | OR                  | ON      | 2009/04/27<br>08:00 |
| S6   | 291  | (cryogenic near<br>distillation) and<br>compressor and<br>(intercooler or<br>cooler)   | US-PGPUB;<br>USPAT; USOCR                          | OR                  | ON      | 2009/04/27<br>08:01 |
| S7   | 78   | ("1831644"   "2497421"   "3246449"   "3246450"   "3781378"   "3899309"   "3899309"   "4285917"   "4285917"   "4522636"   "4545787"   "4544618"   "4589896"   "4589896"   "4598405" | US-PGPUB;<br>USPAT; USOOR                          | OR                  | ON      | 2009/04/27<br>08:05 |

|   | "4602477"               |   | *** |      |
|---|-------------------------|---|-----|------|
|   | "4623704"               |   |     |      |
|   | "4639257"               |   |     |      |
|   | "4654047"               |   |     |      |
|   | "4654063"               |   |     |      |
|   | "4687498" İ             |   |     |      |
|   | "4701187" İ             |   |     |      |
|   | "4717393" i             |   |     |      |
|   | "4717394"               |   |     |      |
|   | "4717407"               |   |     |      |
| * | "4732579"               |   |     |      |
|   | "4732583"               |   |     |      |
|   | "4746474"               |   |     | 1    |
|   | "4749393"               |   |     |      |
|   | "4781907"               |   |     | 1    |
|   | "4793829"               |   |     | 1    |
|   | "4793832"               |   |     | -    |
|   | "4817392"               | ***                                     |     | -    |
|   | "4818254"               |   |     | ***  |
|   | "4840646"               |   |     | 1    |
|   | "4851014"               |   |     | -    |
|   | "4874401"               |   |     | **** |
|   | "4880699"               |   |     | 1    |
|   | "4881953"               |   |     | -    |
|   | "4892564" I             |   |     | ***  |
|   | "4897092"               |   |     | ***  |
|   | "4929405" I             | ***                                     |     |      |
|   | "4929405  <br>"4944775" | -                                       |     |      |
|   | "4948400" I             |   |     |      |
|   | "4952219" I             |   |     | 1    |
|   | "4968331"               |   |     | *    |
|   | "4971695"               |   |     | -    |
|   |                         |   |     | -    |
|   | "4978573"               | ***                                     |     | -    |
|   | "4988371"               |   |     | -    |
|   | "4994095"               |   |     | -    |
|   | "5000763"               |   |     | -    |
|   | "5007945"               | ***                                     |     | -    |
|   | "5009679"               | ***                                     |     | -    |
|   | "5013332"               | *************************************** |     |      |
|   | "5015269"               |   |     |      |
|   | "5034026"               |   |     |      |
|   | "5034027"               |   |     |      |
|   | "5035727"               |   |     |      |
|   | "5041149"               |   |     |      |
|   | "5042992"               |   |     |      |
|   | "5049169"               |   |     |      |
|   | "5055616"               |   |     |      |
|   | "5082481"               |   | -   |      |
|   | "5086623"               |   |     |      |
|   | "5116504"               |   |     |      |
|   | "5151022"               |   |     |      |
|   | "5409525"               |   |     |      |
| - | "5520809").PN. OR       | ***                                     |     |      |

|             |     | ("5837032").URPN.  |  | -  |     | ******              |
|-------------|-----|--|--|----|-----|---------------------|
| S8          | 900 | (415/198.1).CCLS.  | US-PGPUB;<br>USPAT;<br>USOCR; EPO;<br>JPO; DERWENT | OR | OFF | 2009/04/27<br>08:35 |
| S9          | 0   | ("006and8").PN.  | US-PGPUB;<br>USPAT;<br>USOCR; EPO;<br>JPO; DERWENT | OR | OFF | 2009/04/27<br>08:35 |
| S10         | 1   | S6 and S8  | US-PGPUB;<br>USPAT;<br>USOCR; EPO;<br>JPO; DERWENT | OR | ON  | 2009/04/27<br>08:36 |
| S11         | 1   | "417".clas. and (S3<br>S4 S5 S6)   | US-PGPUB;<br>USPAT;<br>USOCR; EPO;<br>JPO; DERWENT | OR | ON  | 2009/04/27<br>08:36 |
| S12         | 5   | (US-5282726-\$ or<br>US-4303372-\$ or<br>US-3947146-\$ or<br>US-5837032-\$ or<br>US-5082481-\$).did. | USPAT  | OR | ON  | 2009/04/27<br>08:43 |
| S13         | 2   | S12 and (cooler<br>with (pressure near<br>drop))   | USPAT  | OR | ON  | 2009/04/27<br>08:44 |
| S14         | 1   | S12 and (\$cooler<br>with (pressure near<br>drop))   | USPAT  | OR | ON  | 2009/04/27<br>08:44 |
| <b>S</b> 15 | 543 | S4 and (distill\$5 with column)  | US-PGPUB;<br>USPAT; USOCR                          | OR | ON  | 2009/04/27<br>09:09 |
| S16         | 8   | S5 and (distill\$5 with column)  | US-PGPUB;<br>USPAT; USOCR                          | OR | ON  | 2009/04/27<br>09:10 |
| S17         | 34  | ("4398926"  <br>"4548618"  <br>"4654047"  <br>"4732583").PN. OR<br>("5082481").URPN.                 | US-PGPUB;<br>USPAT; USOCR                          | OR | ON  | 2009/05/04<br>12:10 |

| S18 | 78                                      | ("1831644"  | US-PGPUB;    | OR                                      | ON | 2009/05/04 |
|-----|---|-------------|--------------|---|----|------------|
|     | -                                       | "2497421"   | USPAT; USOCR |   |    | 12:11      |
|     |   | "3246449"   |              |   |    |            |
|     |   | "3246450"   |              |   |    |            |
|     |   | "3781378"   |              |   |    |            |
|     |   | "3899309" j |              |   |    |            |
|     |   | "3989478"   |              |   |    |            |
|     |   | "4285917"   |              |   |    |            |
|     |   | "4392871"   |              |   |    |            |
|     |   | "4522636"   |              |   |    |            |
|     |   | "4545787"   |              |   |    |            |
|     |   | "4548618"   |              |   |    | ***        |
|     |   | "4560394"   |              |   |    |            |
|     |   | "4589896" I |              |   |    |            |
|     |   | "4595405" I |              |   |    |            |
|     |   |             |              | ***                                     |    |            |
|     |   | "4598137"   |              | -                                       |    |            |
|     |   | "4602477"   |              | -                                       |    |            |
|     |   | "4623704"   |              | *                                       |    |            |
|     |   | "4639257"   |              | ***                                     |    |            |
|     |   | "4654047"   |              | -                                       |    |            |
|     |   | "4654063"   |              |   |    |            |
|     |   | "4687498"   |              | -                                       |    |            |
|     |   | "4701187"   |              |   |    |            |
|     |   | "4717393"   |              | -                                       |    | ***        |
|     |   | "4717394"   |              | ***                                     |    |            |
|     |   | "4717407"   |              |   |    |            |
|     |   | "4732579"   |              | -                                       |    |            |
|     |   | "4732583"   |              | -                                       |    |            |
|     |   | "4746474" İ |              | ***                                     |    |            |
|     |   | "4749393"   |              |   |    |            |
|     |   | "4781907"   |              |   |    |            |
|     |   | "4793829"   |              | -                                       |    |            |
|     |   | "4793832"   |              |   |    |            |
|     |   | "4817392"   |              |   |    |            |
|     |   | "4818254"   |              | ***                                     |    |            |
|     |   | "4840646" I |              |   |    |            |
|     |   | "4851014"   |              | -                                       |    |            |
|     |   | "4874401"   |              | -                                       |    |            |
|     |   | "4880699" I |              | *******                                 |    |            |
|     |   |             |              | -                                       |    |            |
|     |   | "4881953"   |              | *************************************** |    |            |
|     |   | "4892564"   |              |   |    |            |
|     |   | "4897092"   |              |   |    |            |
|     |   | "4929405"   |              |   |    |            |
|     |   | "4944775"   |              |   |    |            |
|     |   | "4948400"   |              |   |    |            |
|     |   | "4952219"   |              |   |    |            |
|     |   | "4968331"   |              |   |    |            |
|     | -                                       | "4971695"   |              |   |    |            |
|     |   | "4978573"   | ***          |   |    |            |
|     | *************************************** | "4988371"   |              |   |    |            |
|     |   | "4994095"   |              |   |    |            |
|     |   | "5000763"   |              |   |    |            |

|     |      | "5007945"   "5009679"   "5013332"   "5013332"   "50142691"   "5034026"   "5034027"   "5041149"   "5042992"   "50491691   "5052616"   "5082481"   "5082623"   "5115004"   "5115004"   "5151022"   "5409525"   "5520809"), PN, OR (('5837032"), URPN. |  |    |     |                     |
|-----|------|---|--|----|-----|---------------------|
| S19 | 470  | (compressor and<br>distill\$ and (heat<br>near exchange\$1)).<br>clm.   | US-PGPUB;<br>USPAT; USOCR                          | OR | ON  | 2009/05/04<br>12:25 |
| S20 | 1826 | (compressor and<br>distill\$ and (heat<br>near exchange\$1))<br>and cryogenic   | US-PGPUB;<br>USPAT; USOCR                          | OR | ON  | 2009/05/04<br>13:12 |
| S21 | 2    | "417".clas. and S20   | US-PGPUB;<br>USPAT; USOCR                          | OR | ON  | 2009/05/04<br>13:12 |
| S22 | 625  | (cryogenic adj<br>distillation) and<br>(heat adj exchange<br>\$1) and stage   | US-PGPUB;<br>USPAT; USOCR                          | OR | ON  | 2009/05/04<br>13:21 |
| S23 | 8    | (("5596885") or<br>("4417847") or<br>("5901579") or<br>("5341647")).PN.   | US-PGPUB;<br>USPAT;<br>USOCR; EPO;<br>JPO; DERWENT | OR | OFF | 2009/05/04<br>13:46 |
| S24 | 467  | (417/243).CCLS.   | US-PGPUB;<br>USPAT;<br>USOCR; EPO;<br>JPO; DERWENT | OR | OFF | 2009/05/04<br>14:54 |
| S25 | 429  | (417/244).OCLS.   | US-PGPUB;<br>USPAT;<br>USOCR; EPO;<br>JPO; DERWENT | OR | OFF | 2009/05/04<br>14:54 |
| S26 | 4    | (("5596885") or<br>("4417847") or<br>("5901579") or<br>("5341647")).PN.   | US-PGPUB;<br>USPAT;<br>USOCR; JPO                  | OR | OFF | 2010/02/22<br>15:58 |

| S27 | 191 | "165".clas. and<br>(pressure near<br>drop with transfer<br>near coefficient) | US-PGPUB;<br>USPAT;<br>USOCR; EPO;<br>JPO; DERWENT | OR | ON | 2010/02/24<br>15:21 |
|-----|-----|--|--|----|----|---------------------|
| S28 | 33  | \$27 and (pressure near drop).ab.  | US-PGPUB;<br>USPAT;<br>USOCR; EPO;<br>JPO; DERWENT | OR | ON | 2010/02/24<br>15:24 |

2/25/2010 9:21:17 AM

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